

**Amendments to the Specification:**

Please amend the paragraph beginning on line 25 of page 5 as follows:

The shift register 118 efficiently provides 15 samples of vertical history. To do this in a pipelined fashion, short line delays (for example, 128 samples) are used. Shorter ~~time-line~~ delays are more economical, but increase overlapping memory access. The shift register 118 requires a clock for each read and write. In one embodiment interleaved RAM-shift-register systems 118 are used, and each RAM 118 is  $64 \times (15 \times 10)$  bits (where 64 is the number of lines/sample divided by two, and 10 is number of bits/sample). The item to be written from the shift register 118 back into the RAM 118 is also forwarded to the y-axis FIR filter 120 input. At each new input sample, the next RAM 118 address is processed, until there are no more samples to receive from the previous stage (as may be the case when down-sampling), or until the maximum of 128 samples is reached. This RAM stage is not double buffered, so the timing of the x-axis and y-axis processing has to be synchronized. Two of the center samples presented to the y-axis FIR filter 120 are also extracted as  $f_T(0)$  and  $f_T(1)$ . The y-axis FIR filter 120 output is either the differentiating output (signal gradients "g") or low-pass filter output, depending on how the y coefficients 121 are configured.

Please amend the paragraph beginning on line 1 of page 8 as follows:

Figure 2 is an overview of how image data is processed and stored in an embodiment of a resizing operation using the resizing engine of Figure 1. The resizing engine components are configured ~~102-202~~ for a pass using data that was previously determined and stored. A software routine controls the resizing engine, including configuring resizing engine components. In one embodiment, the software routine and the configuration data reside remotely from the resizing engine. The configurable components include the FIR filters 106 and 120, the multiplexors 114 and 128, and the ratio systems 112 and 136.